DOCUMENT RESUME

ED 200 229 IR 009 265

AUTHOR Pekich, John
TITLE Instructional Television: Potentials or Problems.
INSTITUTION Information Futures, Pullman, Wash.
REPORT NO ISBN-0-931450-15-2
PUB DATE 79
NOTE 44p.
AVAILABLE FROM Information Futures, 2217 College Station, Pullman, WA 99163 ($9.50).

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Communication Problems; *Educational Quality; *Educational Television; *Evaluation Criteria; *Program Effectiveness; *Teacher Effectiveness

ABSTRACT

The potential of instructional television (ITV) for creating excitement for learning has been demonstrated by such productions as Mr. Rogers' Neighborhood, The Electric Company, and The Adams Chronicles. However, not all producers have been this successful in merging the capabilities of television with the needs of learners, and a review of the strengths and weaknesses of ITV is in order for both producers and those considering using it. Strengths include the capability of hiring the best available teacher, using a professional production staff to plan quality productions, encouraging good quality teaching, extending appeal to a wide audience, bringing immediacy to learning, preview opportunities, improving classroom teacher and student skills, availability of nontraditional resources, attention control, permanence of lessons, and outreach to parents and homebound students. There are, however, several weaknesses, e.g., scheduling difficulties, lack of direct feedback and group discussions, nonindividualized instruction, and high cost of programming. Ideal television teachers communicate with students, think visually, know the subject, display showmanship, and are flexible. To determine the quality of programming, the producer should be asked specific questions concerning program objectives and content, intended audience, educational qualifications of staff, and proof of the program's effectiveness. An extensive bibliography is provided. (BK)

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INSTRUCTIONAL TELEVISION

--Potential or Problems

by John Pekich

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Published by
INFORMATION FUTURES
2217 College Station
Pullman, WA 99163

IR009265

INSTRUCTIONAL TELEVISION--Potentials or Problems

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Published by

INFORMATION FUTURES
2217 College Station
Pullman, Washington 99163
Telephone 509-332-5726

ISBN 0-931450-15-2

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PUBLISHER'S PREFACE

In INFORMATION FUTURES' continuing attempt to put critical issues before professionals in the educational technology and library/information-service fields, issue papers are published. *Instructional Television--Potentials or Problems* by John Pekich is such a paper.

Issue papers are accepted as written by authors. Every attempt is made to provide to the reader the philosophy, concepts, and proposals as written by the authors. No modifications are made in the author's expressions for the purposes of content or format editing.

Pekich has raised a set of questions about instructional television--or possibly the way instructional television is utilized in the teaching-learning setting--that will be of interest to all searching for the promise of the medium. Instructional television is identified as a powerful medium for maximizing the interchange of ideas and supporting learning. But problems are identified by Pekich that might prevent goals for the medium from being reached.

The reader is encouraged to read the author's introduction. First, it provides insight into the philosophies held by the author about instructional television. This understanding should help to further perceive the concepts presented in the three issue papers. Second, the overview of the three papers presented will guide the reader in selective reading.

At the request of the publisher the selected bibliography was added to the set of papers to assist the reader in the further study of instructional television.

The Publisher
November, 1979

AUTHOR'S INTRODUCTION

Somewhere between the superficial gloss of a sitcom and the pre-digested programming of local news lies the strange nether world of instructional television. On rare occasions, remarkably outstanding efforts surface from the recesses of creative minds, secure the necessary financial backing, and become examples of the highest types of educational and instructional programming. Witness, for example, the BBC/Time-Life productions of the complete plays of Shakespeare, an achievement that will not be duplicated in this century. While there are some weaknesses in some of the productions such as the stilted fight staged between the House of Montague and the House of Capulet early in the play, the series shows how it is possible for television to do what it is uniquely suited to do--Bring the very best of the outside world or of other worlds into the home. There are other examples of this excellence such as the continuing segments of *Nova*, *The Adams Chronicles*, and the several mini series dramatizing novels such as *David Copperfield*, *Roots*, and *The Martian Chronicles*. They are still too few, though, and too sporadically produced.

The problems underlying any high quality instructional program are legion . . . Not the least of which is money. Clearly, a sponsor contacted by a commercial network wants the highest exposure for his product to earn him the highest sales; he would not likely wish to underwrite a program that would have potentially low numbers of viewers. The producers are, then, faced with the problem of having to find the right "vehicle" to show, hire the "name" actor or actress to draw viewers, and secure the ideal prime time slot; the sponsor might, then, be willing to back the production.

The educational networks have even more serious problems; again, many are based on money. The producer must come up with a quality project, skilled talent--often not commercially known--and a means to carry out the production on a meager budget and without losing or sacrificing quality. That problem has always existed for educational television and, given the current budget problems facing public broadcasting, will not become much better.

Despite this disparity between the resources of commercial broadcasting and instructional broadcasting, one can still work to create the highest quality ITV (Instructional Television) by using not only the inherent capabilities of television but also the sound, orderly procedures that go into developing any materials for learning. The rules for preparing quality instructional packages are not immediately discarded once television has been selected as the medium for learning; rather, the instructor ought to more rigorously adhere to sound learning principles since the ITV medium will probably be new.

The lack of sufficient funds will always exist. Only through quality productions done with the tightest of budgets, through the efforts of the most skilled of ITV personnel, and backed by strong public support can television ever hope to compete as an exciting medium for learning. With sufficient numbers of successful ITV lessons and with strong educator support, television should become a more viable force in classrooms.

The chapters in this volume examine several issues that interconnect in the creation and development of ITV programming. Each chapter also challenges the basic assumption held by many that television is too complex for the novice to totally understand, yet alone work in. Given orderly procedures for choosing the various components of a telelesson and a process

for analyzing its quality, the user can create unique, interesting, and exciting *television* lessons that will help others to learn.

Television is visual. It demands that what goes into the studio end is of the highest levels else what comes out will be little more than the emptiness of the facade of many slick commercial productions or the dull mediocrity of locally produced programs. Television is too powerful a medium to reflect little more than our glossy dreams and too useful a medium to reinforce the myth that instructional television must be dull and sterile.

The potential of ITV is waiting for the creative person to extend and expand our knowledge in ways that no other medium could hope to equal. That is what the time and effort, the energies and long hours, the talents and technology exist for. All else is secondary.

John Pekich
October 1979

THE POTENTIAL OF INSTRUCTIONAL TELEVISION

The fundamental decision either to use or not to use television for instruction is one of the most haphazard of choices for many educators. Often their reasoning goes something like: We have the hardware, so let's use it. Such a statement comes, not from any understanding of what the medium can do, but rather from a mystical belief in the absolute power of television. The medium has so saturated life that its use is seldom challenged.

Television may be the most abused and misused of all instructional media. In its visible competition with commercial efforts, ITV can little match the wealth of personnel and money that back such an educational special as *Jane Goodall and the Wild Chimpanzees*. Yet, ITV has the same potential for creating excitement for learning as apparent in ***The Adams Chronicles***. Somewhere, the producers of the above--plus ***Mr. Rogers Neighborhoood*** and *The Electric Company*--have found the ideal merge for the capabilities of television with the needs of learning. Unfortunately, the producers of the countless deadly lessons that saturate our schools via public television have not. For them and for those considering using Instructional Television, a restatement of what television can and cannot do is in order.

Strengths of Instructional Television

Best Available Teacher

ITV can hire the best available teacher to present lesson content. Whether the teacher is from the classroom or from an acting group depends upon the policies of the station and the producer. The point is that the

challenge exists for the lesson producer to use the most competent person. An open audition is a clean and obvious means of identifying who has stage presence, who can play to the camera, who can think visually. Compensation for the classroom teacher hired as the ITV instructor should be at least a 10% increment; the professional actor will, of course, work for scale. Their services are worth whatever they receive.

Professional Production Staff

In the best sense, ITV offers a highly trained staff to create exciting and effective lessons. The complexity of that staff is determined by a balance between the available resources and the quality of the programming produced by the station. A high budget facility is expected to create excellence in its work; a low budget one can do so if it establishes clearly defined priorities. In the more sophisticated station, key production positions are staffed by uniquely creative individuals with specific responsibilities. In the smaller station, one person performs varied roles. While there may be a correlation between the size of a production facility and the quality of programming, it is not always true. The smaller station may be capable of producing quality content, but only a limited number of productions.

The production staff--or at least the skills represented--are several:

Television Teacher
Producer/Director
Research Assistants
Curriculum Specialists
Artists
Scenery/Prop Designers
Studio Technicians
Evaluation/Review Personnel

The staff is highly skilled, able to provide the television instructor with technically clean materials and competent support to create

effective lessons. When one or more of the staff is lacking, or when roles are combined, the quality of the content must drop.

Planning Time

Sufficient time must be allotted for the production of each lesson. A non-unreasonable guide for the larger studios is 35 hours per week for a half-hour lesson for production preparation and 3-5 hours studio time. Another guide is approximately 2 hours production time for each minute of the lesson. Unfortunately, smaller studios are forced into tight production schedules with a resultant drop in production quality. The point is clear: ITV stations must provide time to produce effective lessons. If they cannot do this, they should reduce the number of productions and concentrate on a few quality lessons.

By reducing the number of productions, they may initially antagonize some clients who wanted television services. Over a period of one or two years, though, the station will build an inventory of quality lessons, plus a reputation for excellence in production. That is what the allocation of time is about--producing the highest possible quality of lessons.

Quality of Teaching

The ITV teacher has two major concerns which affect the quality of lesson content: the fact that he is the best available for lessons and the need to do the best possible production because the audience is not present for reaction and feedback. Being the best available carries the burden of producing the best available lesson. The production staff is expecting it. The teachers who did not pass the audition are expecting it. Professional colleagues are expecting it. And students are expecting it. The ITV teacher has little choice.

The absence of an audience poses a more serious problem. Since no immediate feedback is present, the ITV teacher is forced to do extensive pre-lesson planning and preparation, including a preliminary tryout of the content, before the final taping. When feedback does come from viewers and users, it may be delayed by a week or more. The burden becomes one of anticipating problems, selecting appropriate materials and strategies, and scripting a lesson that will work.

Wide Audience Appeal

Television can extend the effective teacher and lesson to a broad audience. With global satellites, millions of students can receive the same degree of instructional excellence. Practically speaking, more students in a state or school district can now have the means to learn from a lesson or series that has been methodically planned and creatively executed through the combined efforts of a professional staff. The cost for a school or district to obtain the lesson--available via open broadcast from a state or local television center--is a nominal fee of one or two dollars per pupil per year to offset printing costs for teacher and student guides and related support materials.

If the lessons come through a school or district media center or college rental service, the fee is minimal. The quality is there, whether for a student in Los Angeles, Houston, or Pittsburgh. That is the strength--the unlimited distribution potential of television.

Intimacy

Television is intimate. If the ITV teacher and staff produce a visual lesson, a 1:1 relationship with the student is established. As far as the student sitting in the sixth seat, eighth row, Basic Anatomy and Physiology

is concerned, the television instructor is speaking directly to him. This assumes that the instructor is maintaining proper eye contact, has scripted the content to direct it to the single student, and has built into the content segments designed to draw the student actively into the lesson. The effect is not unlike a personal tutor for the student, carefully leading him, calling for participation, and permitting an opportunity for the student to relate to the television format. This is powerful use of the medium and effective instruction. The immediacy facet of ITV is obvious in the effective lesson and noticeably absent in the commonplace majority of lessons.

Release Time for Classroom Teacher

ITV can release the classroom teacher from having to prepare for particular content which will be covered in the televised lesson. Instead, he can use that time for in-depth preparation of related material to be used with the lesson or for other instructional activities. This is not to imply that the ITV lesson frees the classroom teacher from having to do his job. If anything, the lesson places increased responsibility on the teacher to make better use of the time, to prepare for using the ITV lesson, and to adapt his normally traditional teaching methods to ones which include ITV.

Preview Opportunity

ITV offers the potential user the opportunity to preview a lesson or series prior to using it. If the material comes via open broadcast, the teacher can normally view the lesson during times set aside specifically for preview. If the lessons are locally produced and/or controlled, previewing becomes a matter of scheduling. The teacher can determine, this way, the relevance of any or all of the content for a course, can select out of the lessons many points which might be confusing and prepare for possible class

problems, and can decide what preparatory materials may be needed to improve the reception of the ITV lesson. The teacher can also plan for pre-lesson, during-lesson, and post-lesson activities for himself and his class. Appropriate vocabulary lists, readings, and projects can also be selected to make the lesson an integral part of the teacher's instructional efforts. Curriculum guides accompanying the lessons can be studied for assistance in effectively using the ITV lesson. All of which is designed to show that the opportunity to preview a lesson gives the teacher the chance to help students receive the maximum benefit from the lesson.

In-Service Value

An effectively produced ITV lesson has a value beyond the obvious of aiding students in learning. It can also help the classroom teacher to improve teaching skills. By observing the use of visuals, of sequentially organized materials for building upon learning, of drawing students into the content through active participation, the classroom teacher has models for using in the so-called traditional teaching mode. The teacher can also benefit from the variety of resource materials that had been used in the ITV lesson.

A second benefit is the in-service value to the student. By learning from another teacher and by working with a relatively novel approach to learning, the student might refine his methods for and attitudes about education. He may become excited and challenged by the ITV presentation; he may gain insights into critical concepts more clearly presented via television than by traditional methods; and he may be challenged through suggested projects or readings that normally would not have been suggested in class. The process for learning can be significantly expanded by this in-service dimension of ITV.

Basic Skills Improvement

By its design and intent, an ITV lesson is offered the student at a fixed pace with built-in elements for student participation and review. The student is introduced to an organized pattern of content requiring that notes be taken in a particular sequence. He cannot stop the ITV teacher--in broadcast lessons, at least--and ask for a clarification or review. Indeed, he is forced to refine his note taking skills, using the organization of the lesson as assistance. The transfer to other content areas, to other classes, and to related activities should occur and improve basic skills.

The student is also forced to sharpen his visual literacy by dealing with content presented through a visual medium rather than the traditional lecture of a classroom. He learns to draw content from visual examples, using the television teacher's comments to supplement the content. In so doing, he can improve his abilities to "read" visual material in other classes or other activities such as watching commercial films and television.

In the case of ITV lessons which can be controlled locally, the same opportunity to improve visual literacy skills holds true with one obvious advantage: The student can view the lesson as often as necessary until content is mastered. Such a student has the means to refining note taking skills to a degree not available to the student in a traditional classroom.

Availability of Non-Traditional Resources

The ITV lesson has the potential of tapping a wealth of resources not normally accessible to the classroom teacher. Such resources may be people, places, objects, techniques, or special effects that are either too expensive for the classroom teacher or too distant in time or place. Additionally, the ITV staff can design a variety of models to illustrate concepts, produce animated films to explain complex processes, or challenge the time sense by dramatically going forward or backward in time.

This unlimited resource pool offers the creative ITV teacher and staff the challenge of producing the best possible lessons. The teacher in such an environment has the tools to extend his teaching abilities and improve upon them, to refine what can be taught and how it should be learned, and realize that there is no limit to the potential for learning . . . . Only to the imagination and creativity of the user.

This cornucopia of resources also extends to the classroom. The teacher can see how learning can be enhanced by the variety of materials to define and refine concepts, to illustrate rather than merely lecture, to challenge the student by stimulating his interests in such a way that goes beyond the textbook. That the ITV lesson is also a resource to the classroom teacher is important since it serves the dual role of being a medium of content as well as a model for new instructional methods. Such a view demands that the classroom teacher become part of the learning that should occur during the showing of the ITV lesson and not act as one who takes the mental cigarette break when the set is turned on.

Immediacy

One of the most powerful strengths of television is the ability to be anywhere at any time, to witness and record the significant events in civilization or the most mundane and be able to send those images into the classroom as they occur. The variety of experience from the Apollo moon landings to the funeral of John Kennedy, the Munich Olympics to the international chess championships, the debates of the United Nations Security Council to the forums of local government are witness to the power of television in bringing the world and beyond into the classroom. The events are now and immediate, and the impact on the student goes beyond anything that can come from other media. The total experience is essential to the

student. It can be expanded upon by the ability of television to be the window for and to the world.

Attention Control

Television has the unique ability of directing the student to precisely what the teacher wishes to show. There is no digression, no irrelevant aside that arises in the classroom. The information is so organized that the student can only relate to what is essential, can be guided and encouraged to think about specific contents or processes, and draw conclusions which follow logically from the given information. The use of the video close-up means that the student does not have the chance to consider anything other than the particular facial action or expression, the organ of an animal being dissected, or the painting technique being demonstrated. He cannot see what is happening to the side of the demonstration, cannot become fascinated by a student's reaction to the body design of a car when only the engine is shown--the body design will come when it is time for that stage of learning. Few classroom teachers will ever maintain such total control over what is presented and what the student will see and respond to.

Permanence of Lessons

The advent of relatively inexpensive recording and playback equipment and video tape has revolutionized learning. Tapes are easily recorded, duplicated, played back, and stored for future use. Given the considerations of being out-of-date or irrelevant, video lessons can last as long as the content is useful for learning. Then it becomes a matter of erasing the contents and recording or duplicating new material. The size of the open-reel and cassettes is little more than a text and requires similar space for storage. The only special requirements for video tape are temperature and humidity

control; in the age of air conditioning, that is a minor problem. Schools can develop extensive video tape libraries to complement in-class instruction, provide basic instruction, and enrich students' lives.

Out-Reach

ITV has the capacity to reach out to students who do not or cannot attend class in a formal setting. Open broadcast lessons permit the homebound student to receive instruction, permit the drop-out to come back to school, and permit the senior adult the opportunity to receive a college education. Beyond that, ITV can reach the professional community through in-service programming. It can also enrich all people's lives through a wealth of concerts and special programs and can permit the public to watch and, in some instances, participate in the debates of local government. The American Samoa and Chicago Junior Colleges of the Air successes underline the diversity of television while Alan Shepard golfing on the moon and Jacques Cousteau tracing the routes of the Killer Whale both enrich and relieve the monotony of dull scientific exploration. All this is and can be done through television and the student need not be in a seat in a classroom to enjoy and learn from such programs.

Parent Education

Television offers parents the opportunity to view what their children are using for learning and, if they so choose, work along with the students. The parents are no longer isolated from the curriculum and dependent upon the partial materials and information that their children might bring home. It is not unreasonable for schools to open their video tape libraries to parents to permit them to better understand what is expected from the child in terms of content mastery. Nor is it unreasonable to give parents the

opportunity to react to the content of courses, particularly those on video tape. The rapport between parent and school can be enhanced and the sense of isolation that a parent develops minimized. More important, the parent can help the student having difficulty with content; he can also share with his son or daughter the wonder and mystery of new learning and travel together backward in time to the Old Stone Age or into the future and the first contact between Earth and other civilizations throughout the galaxy. Such moments must be encouraged and television has the unique capacity to do so.

Weaknesses of Instructional Television

Scheduling

Broadcasting poses the often difficult problems of scheduling the viewing of a lesson or series at a time convenient for the teacher and students. At times, students may be required to view a lesson out of context or be denied seeing the lesson because it doesn't fit the prepared lesson plans. Unfortunately, the rigidity of a broadcast schedule is difficult to overcome.

Many ITV stations attempt to have repeated showings of particular lessons or series to offer alternative showings for students. Also, many stations publish programming schedules which list the show dates, include support materials about the content, and permit the teacher to orient himself to the lessons. Finally, many ITV stations have given approval for schools to record programming at more convenient times; the time limit on off air duplication is usually seven days, sufficient time for most teachers to make adjustments in teaching plans.

Closed-circuit systems which have local control do not pose severe scheduling problems. Often it is simply a matter of planning a week or two in advance to schedule a showing of a particular lesson. Last minute changes or cancellations are easily accommodated in the closed circuit system.

Similar convenience in scheduling also occurs with tape libraries with the material normally available with a one-week notice. What appears, then, to be a major problem with ITV becomes less important as the alternatives to using it are known.

Lack of Direct Feedback or Give-and-Take

ITV lessons are usually one way, requiring that the burden be placed on the producers for anticipating any areas of misunderstanding or confusion in students. There is seldom any opportunity for questioning and challenging or feedback to the ITV teacher. On the surface, this may be a serious problem. In fact, the well-planned and executed lesson cannot tolerate any disruption of its sequence. Given a limited amount of time, a specific organization, and defined objectives, the production must continue to the end else learning will be jeopardized.

There is no reason, though, why a two-way hook-up via telephone lines cannot be maintained, especially where a fixed sequence is not required. Seminars, lectures by prominent individuals, or debates are clearly justified in using the direct give-and-take. Not only do the students become part of the ITV session, but the instructor operates in the live and challenging atmosphere of the real world.

Non-Individualized

Broadcast ITV is necessarily a broad-appeal approach to learning. It is generally impossible financially to produce a series that can be modified to meet a variety of learners' abilities. To that extent, the objection is valid. If ITV, though, is designed to supplement a course of instruction and if the lesson can be recorded for later use, this objection becomes less important. Granted, the if's are important and will hold for some schools.

One possible solution for schools that cannot record off the air lies in the realization that the ITV lesson may not be suitable for all students. Clearly, a student who has already mastered the content should not be required to view the material, nor should the student who does not have certain preliminary skills or has not met certain prerequisites. At that point, the ITV lesson becomes individualized for those students who can benefit from its content. The other students who will not view the lesson can be assigned materials and exercises better suited to their instructional needs. In a circuitous way, ITV can be individualized.

Denies Group Discussion

With the fixed sequence of broadcast ITV, groups are prevented from discussing points raised during the lesson. Groups are also discouraged from forming common assumptions and testing their validity as during a traditional class. The argument holds for the fixed sequence of the content: If that sequence is interrupted, the lesson will not be completed and learning may suffer. The group should be encouraged to jot down notes about specific points in the lesson and hold them for later discussion.

With local control either via closed circuit or teacher controlled playback, the lesson can be stopped and key points discussed among the group. Part or all of the lessons in a series can be eliminated and adapted to meet the needs of the group. The group can also decide when the tape should roll or stop. In its unique way, ITV can be individualized to the collective needs of the group.

Absent Student Misses Content

During the early days of broadcast ITV, the absent student posed special problems in terms of getting the missed lessons. Now, the absent student can view the lesson at home. He may also view a recording of the

lesson on file in the tape library both at his convenience and at his rate of stopping and starting the videoplayer. As more schools both increase and improve access to recorder/players and tape inventories, this objection has less credence with arguments for or against ITV.

Cost

While the relative expense of ITV may be high, the outlay is determined by several concerns: sophistication of the complex; broadcast or closed-circuit; color or black-and-white; original production or off-air duplication and distribution; school or campus classroom distribution; school's instructional objectives. These and other related concerns will determine whether two thousand or two million dollars are spent on instructional television. The range of costs is commensurate with the range of expectations and requirements.

Built into the hardware costs are those for production of software supplies. The more sophisticated the programming, the more complex and expensive the supporting materials such as films, graphics, models, and special purpose items. Backing the materials will be the need for and expense of a professional staff. Increased sophistication of equipment and programming demands more competent professionals to perform the skilled jobs.

One added expense is that of maintenance. The simple one camera, one deck, one monitor closed circuit system can be maintained for a low cost; often the work is done by technicians who handle the routine audiovisual hardware distribution. As the production facility expands, the need for qualified technicians rises; the maintenance personnel assume critical roles in insuring that quality productions occur with minimal equipment failure or downtime. Their salaries will necessarily be high for the essential

services they provide. They will tend to have the system last longer, provide higher quality service, and be less prone to the unexpected failure that occurs when non-professionals operate the equipment.

Quite simply, quality production is expensive, but the return in learning is the key concern for any school considering ITV.

Conclusions

Instructional television is capable of providing exciting alternatives to the traditional lecture format in the traditional classroom. Its use should depend, though, on an understanding of and appreciation for the unique qualities of the medium. Television should not be used simply because it is there. Such action questions the very nature of instructional technology and will insure that the experience with ITV will fail.

Schools have known too many defeats with instructional technologies to suffer more. Equally important, schools must look to the student and his learning needs and build processes and materials that will help the student and not unnecessarily confuse and complicate his learning. ITV has the potential to do both. Hopefully, the users will choose the positive and not repeat the negative, reinforcing the beliefs that instructional television is dull.

* * * * * * *

The following will assist those wishing to explore further the potential of instructional television:

Educational Broadcasting
Educational Communication and Technology Journal (formerly *Audiovisual Communication Review*)
Audiovisual Instruction

The above periodicals are basic reading for anyone working in instructional television.

George N. Gordon, *Classroom Television* (New York: Hastings House, 1970).

Lawrence F. Costello and George N. Gordon, *Teach with Television* (New York: Hastings House, 1965).

Robert L. Hilliard, ed., *Understanding Television* (New York: Hastings House, 1964).

The above texts are basic for both hardware and software discussions.

BEYOND THE TALKING FACE

The Instructional Television Teacher has come a long way from merely being a talking face. Yet, little is known about what makes up the "best available" ITV teacher. The arguments continue in the literature about whether the person ought to be a professional teacher or an actor. For the former, the reationale says that the content expert will be able to more accurately and smoothly present the material; should an unexpected problem arise during the production, the content expert could adapt and save the program. For the latter, the rationale argues that a trained actor will be comfortable with television and can play to the camera; content can be learned as easily as any script. Each side has its supporters and each is quick to show the merits of one over the other. Generally, though, ITV stations use the classroom teacher while commercial centers draw upon the actor. Budgets may play a significant role in such a dichotomy.

Some common denominators may be listed to define the often intangible ideal television teacher. The characteristics hold for either the professional teacher or the professional actor. The emphasis on some of the personal qualities will vary with the individual talent.

Can Communicate with the Student

Of all the qualities, this is the most critical. Without this skill, the ITV instructor will lose the student, regardless of how technically clean the production may be. Despite insights from information theory, much remains unknown about the precise elements of the effective teacher. One point is clear: This individual can reach the student on the student's level. There

is a blending, a meeting of the student and the teacher, on a one-to-one relationship. When it happens, all can see it; when it is missing, the deficiency is obvious. Open auditions are an excellent means to identify the effective communicator.

Can Think Visually

Television is a visual medium. All that happens must be directed to that end--show visually, reinforce orally. Show, then tell . . . not the reverse. If the aspiring television instructor comes from a traditional teaching background, he will do the opposite, using visuals to reinforce what he says. Carefully controlled auditions must be arranged so that the prospective talent can select visuals for a lesson segment. Those who think visually will reveal themselves as soon as the lesson begins.

More than knowing the types of visuals most appropriate, this individual must also have the capacity to make himself part of the visual message. How he dresses, how he stands or gestures, how he takes cues and moves on-camera are part of the visual ability. If the instructor is able to picture a scene as through the camera and, therefore, the viewer's eyes, he will be a solid asset to the production. If, on the other hand, he can only relate to how he views himself before a camera, he will become the immobile talking face.

He is not expected to design technically attractive visuals nor indicate the particular camera angle for a given scene. He is, though, expected to understand why a close-up would work better in a given scene than a medium shot. He must know the difference between an objective and a subjective view, as well as when to use each. In short, the closer he can become to being a visual thinker, the stronger he will make the production.

Knows the Subject

Without a thorough knowledge of the lesson and/or series content, the television instructor will come off a miserable failure. The student will pick out the errors or the shallowness of learning and will react by mentally turning off the lesson. A knowledge of the subject will permit the instructor to develop the lesson along concepts and not a verbatim script. Should something not work during the production, the content expert would be able to make necessary adjustments to save the lesson. Perhaps most important, the content expert will help in selecting appropriate props or visuals to support the content.

Should the talent be a professional actor, he can still be knowledgeable about the subject. The burden increases, though, for the producer or director to insure that the talent has sufficient depth of knowledge in the subject. Of course, if the talent memorizes a script and no problems occur during production, the lesson will be a success. The actor, unfortunately, cannot anticipate problems or make adjustments to props that don't work as designed; the element of the unpredictable always haunts the use of an actor. This is not to say that he must not be used, only that the production staff should be aware of some of his limitations.

Is Creative

This is an intangible quality, but it describes the talent who is able to look at an instructional problem and devise original approaches to solving it. Equally important, this quality defines the ability to mold and shape a production by the talent's choice of style and presence of delivery. Such an individual is resourceful enough to make on-camera adjustments, when necessary, to save the production. In fact, the innovative ITV instructor is able to take a seeming disaster and turn it, on-camera, into a highly original event.

Care must be taken to determine whether an action is creative for the production or merely self-serving. A simple test is to try the suggested approach or material; if it adds to the production, it will be obvious. If, instead, it is used to enhance the instructor's image, that will also become apparent. Creativity is so difficult to find; often it must be sought out and protected when it appears. Creative individuals must be encouraged to express their ideas, even if the majority of the production crew opposes a particular concept. The sharing of the novel idea may be the stimulus needed to put life into an adequate lesson.

Can Cooperate With Others

The talent is only one among many in a television production. Depending upon the size of the station and the available resources, the instructor may function as producer/director/writer to merely being one of a dozen or more professionals. He must be willing to work with others--director, producer, writer, camera crew, artists, video and audio engineers--to make the lesson a success. He must be willing to shape his own needs into a total production, understanding where he fits and how he must relate to others.

It is a truism in television production that, if each production crew member does his designated job, the project will probably fail. Too often, unforseen problems arise, requiring last minute adjustments. A missed shot can be saved by an alert camera operator. A creative director can enhance a traditional shot. The opposite will also hold true. The success of a production depends upon how well each member works with others; one cannot act alone.

Knows Personal Limitations

By knowing his particular strengths and weaknesses, the television instructor can accept them and minimize or enhance their effect on the lesson. An individual who has a unique gesture or pose or trait, ought to accept rather than attempt to mask it and jeopardize the success of the lesson. The nervous twitch or movement that students have come to expect and love should continue; that is part of the instructor.

On a more serious level, though, is the arrogance that might accompany the instructor. By being in a position of visible importance, that person might easily think he has abilities that are equal to or greater than other members of the production staff. He may, for example, insist on certain directorial moves, even though he has little experience in that area; he may insist on certain script changes, despite the possible harm to the lesson. Clearly, the competent instructor understands his strengths and weaknesses and is able to use them to the advantage of the total production. He should be willing to add to a project if he has experience in writing or directing or set design; he should do so only from his expertise and not from an inflated sense of self-importance. The prima donna does not belong on a television set. Professionals do.

Can Accept and Give Criticism

Perhaps the most durable creature God ever made is the television instructor with rhinoceros hide. He is rare; when found, he should be well-watered and pastured, and seldom mistreated. Unfortunately, he is the most visible and vulnerable of the production crew. If lines are dropped or cues missed, he is immediately corrected; it may be a gentle word to try it again or it may be a harsh expletive. Each extreme is both necessary and unexpected. The instructor must be prepared to learn that he is not the

wittiest or handsomest or most relaxed talent; nor is he necessarily the most knowledgeable about television. In fact, he may encounter a technician who cares less for the content of a lesson than for the paycheck he will receive from operating one of the program's cameras. This individual will fail to respond to the obvious "star" qualities of the instructor.

The most brutal awakening facing the ITV instructor is the playback of the lesson. Suddenly, the shot that the instructor insisted upon as being crucial to the impact of the lesson appears as mundane and irrelevant, even detrimental to the lesson. That awful silence falls over the crew and the instructor looks to the nearest exit. This is the precise moment when being the rhinoceros is essential for the survival of the production.

The television instructor must also realize that he can offer valid criticism of the lesson. If something doesn't "play" right or if word choice is awkward, he should speak up, suggesting specific changes. In fact, the instructor should insist on those changes which he believes will improve the integrity of the production; they can be tried during a run-through and accepted or discarded. He must realize that he is also an equal with the other professionals in the studio. He ought not to be pushed or manipulated away from what he believes to be effective techniques or materials. If shown to be wrong, though, he must admit and accept the error, then forget about it and work ahead to complete the production.

Can Work Under Pressure

The clock inexorably guides the production, creating a high level of pressure. As the taping or broadcast time arrives, tempers become short and an ego is easily shattered. To survive under often intense amounts of pressure requires an individual of unique abilities. He must have the drive and self-control to suddenly step into a taping session that has been moved

up by two days. He must be able to continue in the face of illness, budget cuts, shifting production priorities, damaged or missing props, microphone failures, and any of the hundreds of other crises that always develop. And he must be able to do this with the patience and tolerance of a saint. Unfortunately, others on the crew may not wish to canonize either him or the production. Come air time, though, all solidifies and the pressures of hurt feelings and long hours and cold coffee are almost forgotten.

Is Flexible

Rigidity will kill the best of production designs. If the ITV instructor refuses to accept alternative approaches to solving set or content problems, he will destroy the opportunity for creative lessons. Such an individual must be screened out by audition or dropped from the production early in the planning stage. To continue with a person who refuses to bend, or who refuses to accept any approach but the one he designed, will doom the production. The time and effort spent in attempting to sway his rigid thinking becomes wasted time, unless the talent happens to be a key official who insists on being the instructor.

If an individual is required to be in the lesson, but is not the most qualified talent available, time must be spent early in the production planning alternative approaches to the lesson. The merits of each must be examined and, if necessary, taped to show their strengths and shortcomings. Time must also be consumed in allowing the talent to practice teaching with either different methods or materials so that he will better understand the need for flexibility in the production. Rigidity may be broken down as the talent acquires not only confidence in himself, but also in what must be a new and exciting medium for him.

Displays Showmanship

The best ITV instructor is part teacher, part huckster, part used car salesman. He cajoles and wheedles. He is the flim-flam man out to sell the student by the sheer magnetism of well-packaged content. He adds an element of theatricality and sobriety, comedy and pathos, anger and joy. He is the Pied Piper coming down the road to lead the students to a brighter, better world of knowledge.

Beware the flim-flam man. He will reach out and give the world something bright and clean and marvelous. He will help the world to learn.

The effective ITV teacher is a curious person, elusive to catch and define, almost like a dream that defies recall. There are traits which clearly label one person as good and other traits that just as clearly label one as bad. The differences are that stark--Good versus Bad. The problem is one of identifying each so that production delays, breakdowns, or failures are reduced and learning is enhanced. ITV has a tremendous potential for being more than the traditional talking face. It has the power to seize and hold the student, to transport him off to unlimited worlds of mind. It has the equally powerful ability to suppress any creative interest in learning.

In the most basic terms, the best television teacher is one with the correct knowledge, attitudes, and skills. But like instructional objectives, these terms are complex to define and isolate. Work must continue on finding the best possible person to appear before the camera. The vast potential of television must not be lost through mediocrity. Education has too much of that.

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NOTE: For those interested in continuing with the "best available" ITV instructor, the following books will help:

George N. Gordon, *Classroom Television* (New York: Hastings House, 1970).

Lawrence F. Costello and George N. Gordon, *Teach with Television* (New York: Hastings House, 1965).

Of the two, the second is the better treatment of designing and producing instructional television lessons. It contains, for example, a sample script, including necessary shots, props, and related activities.

Herbert Zettl, *Television Production Handbook* (Belmont, California: Wadsworth Publishing Company, 1968).

This is an excellent overview of the complexities of television production. While a commercial orientation, both in terms of equipment and programming, the text will complement the above-mentioned Gordon book. A workbook may also be purchased to accompany the text.

The following periodicals are, of course, required reading for anyone seriously interested in producing instructional television lessons.

Educational Broadcasting

Audiovisual Instruction

Educational Communication and Technology Journal, formerly *Educational Communication Review*

TO KICK IN THE SCREEN . . .

I suspect each of you has, at one time or another, wanted to kick in the screen of a television set after having viewed a so-called "educational" program. After a few seconds, though, the passion died and you resigned yourself to defeat without trying. That is passed. Now you can vent your anger in a positive way and perhaps improve the quality of educational programming.

With patience and determination, you can set a process in motion that can change the preconceived ideas of what producers and network executives think is "educational" and force them to improve program quality. In so doing, you will also undergo major changes in your own attitudes about what is quality educational programming.

You have the right to ask the producers and the networks for clear answers about both the quality of the content and the best use of the program. You should press for information until you are satisfied that all of your concerns have been resolved. Unfortunately, you may not receive all of the information needed to make decisions about the quality of particular programs. Your requests will probably be handled by a middle-level executive from some programming or public relations department; he will glibly sidestep your questions and give generalized comments about how good the program is because it cost so much or because it has a certain professor advising the staff or because it uses new and exciting production techniques. What all that means is that he knows as little as you do about the educational value of the content. Listen politely to what he says, then continue pressing for specific answers.

In particular, demand answers to the following questions:

What is a person supposed to learn from the program content?

For what specific group is the material geared?

Who selected the program content?

What are the educational qualifications of the production staff?

What proof is available to show that a person can learn from the program content?

The answers to the above questions will give you the right information to decide whether you or your child should bother viewing a program under consideration.

What is a Person Supposed to Learn from the Program Content?

This is the most important question you can ask the producer or the network running the program. The answers will, quite simply, tell you what you can expect to learn and whether watching the program might not be a waste of time. These should be clear statements of the exact knowledge or skills to be learned. If you do not receive this information or if what you end up with are unclear generalities about how your child's world will be greatly expanded, don't waste your or your child's time with the program.

If you want to appear knowledgeable in this area of education, ask for a list of *specific instructional objectives* for the educational program. The word *objectives* refers to nothing more than statements of what a person will learn after viewing a program; the word sounds impressive and it might give added credibility to your request for information.

In many instances, asking for specific instructional objectives will make the producer or the network executive cringe and wish for another line of work. He will probably not be an educator and may be intimidated by your request. Ultimately, he may even be encouraged to check the quality of educational programs and work to improve them.

For What Specific Group is the Material Geared?

If you know what grade level, ethnic level, cultural level, or educational level the content is slanted toward, you can also make some decision about whether you or your child can benefit from a program. Unfortunately, many so-called "educational" programs shotgun the content, trying to reach the widest audience and succeeding in partially satisfying a small number of viewers. Obviously, a program slanted through examples and language level to a middle class child living in one of the Connecticut bedroom communities may not work with blue-collar children in Pittsburgh. The point is clear: The more you can learn about program content before viewing, the better your decision for or against the content will be.

Who Selected the Program Content?

Knowing who selected the program content, the examples, special materials, and production techniques will help you in judging the educational value of the content; you could also make a fair guess about whether or not the program reflects little more than the whims of a writer, producer, or director who has little or no interest in education. Many educational documentaries are written by persons who believe that they are the most qualified to select the program content. They may be the most creative available in production skills; they may also be the most unqualified to produce educational programs. By asking for the names and backgrounds of the persons who actually selected the content, you ought to be able to determine the writer's bias toward that content. You will also be able to identify his audience bias and gain some hints about his competence and concern for creating quality educational programs.

What Are the Educational Qualifications of the Production Staff?

Merely because a program is advertised as being educationally sound does not make it so; in fact, such programs ought to be viewed with the jaundiced eye. If the program has educational value, a hard sell approach will not be necessary. Rather, the merits of the program along with the appropriate answers to the above questions would be part of a comprehensive information campaign directed to parents and teachers to make them aware of the merits of the program. Such a softer approach ought to imply that the production was done by professionals who were also educationally oriented.

If no one on the production staff has any educational credentials--either by education or experience--suspect the program quality. If no educational consultants--teachers, professors, etc.--advised the staff on both content and program design, suspect the quality of the program. If the publicity for the program speaks in absolute terms about how all persons will benefit from the content, suspect the quality of the program. And if no endorsements from any state or national education association accompany the program publicity, suspect the quality of the program.

A program may still be worth viewing despite the lack of any direct influence or control from the education profession. Indeed, some of the deadliest and most boring programs have been produced by educators who followed the rules given in textbooks on producing educational television lessons. Conversely, some of the most exciting and informative educational programs were created by commercial artists. As a rule, though, the influence of educators can be a positive addition to program quality.

What Proof is Available to Show that a Person Can Learn From the Program Content?

Even though you might receive clear answers to all of the above questions, you should still suspect the program quality if you are not told whether the program has ever been tested before being aired. Unfortunately, no producer will give you negative test results. Should a program test out as relatively useless, a producer or a network executive may send you little more than a superficial note indicating that students "enjoy" the material or are "excited" by the content or are "stimulated" by the ideas presented in the program. Beyond such glossy superlatives, there is no substance.

The program content developed as a true educational program or lesson will have been tried-out or tested on persons similar to the final targeted audience; the tryout or test information will accompany publicity about the program. You will be able to see how well you or your child should learn from the content. When such evidence of success or program quality exists, producers are quite willing to share it with you.

Should no tryout data exist, suspect the value of the program. Don't stop there, though. Insist that you be given something--it may be little more than a cursory reaction--to show you how well a person can learn from the content. You should also insist that the producers try out the content before advertising it as being educationally sound. The test market concept in advertising ought to be applied to producing educational programs. After all, program content is also a product geared to a specific market as is any automobile or deodorant.

If you receive accurate answers to the above questions, be happy. You have the information necessary to help you decide about the quality of a specific program and its value to you or your child. That is a nice state of affairs.

If, on the other hand, you receive either partial or no answers, don't give up. Send your requests to the network presidents. Also attempt to find out the program sponsors and send your requests to the company presidents. And, send copies of your requests to such organizations as the National Education Association, the National Association of Educational Broadcasters, the Federal Communications Commission, and any state or local groups concerned about improving the quality of educational programs for television.

Initially, you will feel like a Don Quixote tilting at the windmills of the broadcasting monolith. Soon others will be with you. With direct and visible pressure against them, program producers will be forced to improve the quality of programs. If you can also direct your efforts at the sponsors as a total effort, you may force rapid action; the threat of any economic action by consumers has a curious way of moving people to do things that were not thought possible!

The above questions will guide you in your search of information about program quality. The more you ask, the more you will make producers and network executives aware that quality in programming is important. You may succeed in forcing a change to high quality content. That is what your efforts ought to be about.

Educational programs will improve in quality, your set will remain intact, your foot will be whole--and you and your child will be intellectually richer. What more can you ask?

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NOTE: The following are always interested in your reactions to and concerns about the quality of educational programs on television:

NEA National Education Association
1201 Sixteenth Street, N.W.
Washington, D.C. 20036
(202) 833-4120

NAEB National Association of Educational Broadcasters
1346 Connecticut Avenue, N.W.
Washington, D.C. 20036

FCC Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20026

SELECTED REFERENCES

The following publications and organizations represent a cross section of information about Instructional Television. The materials range from creating and producing original telelessons to challening and improving the quality of commercially available programs. Both philosophical studies and practical guides are listed to meet the needs of those who merely wish to skim the ITV area as well as those who want to complete full television productions.

The list is not all-inclusive. Rather, it is a sampler of sufficient variety and depth to meet the requirements of all save the most demanding of critics. Such is to be expected in a field where so much is available and where the novice often becomes lost in the maze of books and guides and studiees. Without some initial direction, the ITV beginner will do little more than dabble, usually at a safe distance, in the fringe areas of ITV. He may never attempt to go beyond the superficial level of knowing just enough about the language of ITV to sound knowledgeable: He will, of course be intimidated by the thought of writing or producing ITV lessons. For that person, the selected references ought to help, offering him sound ideas and methods of designing and producing telelessons. The references will take the ITV user farther, though, should he so desire, into such areas as information theory, mass media effects of television, and evaluation of commercially produced lessons. The user will be able to explore critical ussues that affect not only the production of telelessons but also a rationale for introducing television into a curriculum.

The references are divided into five general categories:

Television Production

Instructional Design

Television Theory and Criticism

Professional Journals

Professional Organizations

Each category will provide either different information about ITV or more detailed material to solve particular production problems or answer specific questions about learning by television. Much more information is, of course, available to those who choose to continue using ITV in learning.

Television Production

Gerald Millerson, *Basic TV Staging* (New York: Focal Press, 1975).

George N. Gordon, *Classroom Television: New Frontiers in ITV* (New York: Hastings House, 1970).

Gerald Millerson, *Effective TV Production* (New York: Focal Press, 1977).

Lawrence F. Costello and George N. Gordon, *Teach With Television* (New York: Hastings House, 1965).

Robert L. Hilliard and Hyman H. Field, *Television and the Teacher: A Handbook for Classroom Use* (New York: Hastings House, 1975).

Peter Combes and John Tiffin, *Television Production for Education* (New York: Focal Press, 1978).

Herbert Zetle, *Television Production Handbook* (Belmont, California: Wadsworth Publishing Company, 1977).

Rodger A. Winchell, *Videotography: Closed Circuit Television Made Easy* (Minneapolis: Television Series Unlimited, 1973).

Robert L. Hilliard, *Writing for Television and Radio,* 3rd rev. ed. (New York: Hastings House, 1976).

Instructional Design

Robert M. Gagné, *The Conditions of Learning* (New York: Holt Rinehart Winston, 1977).

Leslie J. Briggs, Peggy L. Campeau, Robert M. Gagné, and Mark M. May, *Instructional Media: A Procedure for the Design of Multi-Media Instruction* (Pittsburgh: American Institutes for Research, 1967).

George L. Gropper, *Instructional Strategies* (Englewood Cliffs: Educational Technology Publications, 1974).

Danny G. Langdon, *Interactive Instructional Designs for Individualized Learning* (Englewood Cliffs: Educational Technology Publications, 1973).

C. Edward Cavert, *Procedural Guidelines for the Design of Mediated Instruction* (New York: Praeger, 1974).

Vernon S. Gerlach and Donald P. Ely, *Teaching and Media: A Systematic Approach* (Englewood Cliffs: Prentice-Hall, 1971).

Television Theory and Criticism

James W. Brown, Kenneth D. Norberg, and Sara K. Srygley, *Adminstering Educational Media,* 2nd ed. (New York: McGraw-Hill, 1972).

Sydney W. Head, *Broadcasting in America,* 3rd ed. (Boston: Houghton Mifflin Company, 1976).

Allen Koenig and Ruane B. Hill, eds., *The Farther Vision: Educational Television Today* (Madison: University of Wisconsin Press, 1967).

Douglass Cater and Michael J. Nyhan, eds., *The Future of Public Broadcasting* (New York: Praeger, 1976).

Ray Eldon Hiebert, Donald F. Ungurait, and Thomas W. Bohn, *Mass Media* (New York: Longman Inc., 1979).

John A. Niemi, ed., *Mass Media and Adult Education* (Englewood Cliffs: Educational Technology Publications, 1971).

Frank Mankiewicz and Joel Swerdlow, *Remote Control* (New York: Times Books, 1978).

Horace Newcomb, *Television: The Critical View* (Oxford: Oxford University Press, 1976).

Melvin L. De Fleur and Sandra Ball-Rokeach, *Theories of Mass Communication,* 3rd ed. (New York: David McKay Company, 1975).

Horace Newcomb, *TV: The Most Popular Art* (New York: Anchor Press/ Doubleday, 1974).

R. Blakely, *Use of Instructional Television in Adult Education* (Syracuse: Syracuse University (Continuing Education), 1974).

Professional Journals

Audiovisual Instruction, 1126 Sixteenth Street, N.W., Washington, D.C. 20036.

Educational and Industrial Television, 51 Sugar Hollow Road, Danbury, Connecticut 06810.

Educational Communications and Technology--A Journal of Theory, Research, and Development, 1126 Sixteenth Street, N.W., Washington, D.C. 20036.

Media and Methods, 401 North Broad Street, Philadelphia, Pennsylvania 19108.

Public Telecommunications Review, 1346 Connecticut Avenue, N.W., Washington, D.C. 20036.

T.H.E. Journal, 7 Spruce Street, Acton, Massachusetts 01720.

Professional Organizations
(Information for and about television)

Association for Educational Communications and Technology, 1126 Sixteenth Street, N.W., Washington, D.C. 20036.

Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20026.

National Association of Educational Broadcasters, 1346 Connecticut Avenue, N.W., Washington, D.C. 20036.